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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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ATTN: PATENT GROUP DOCKETING DEPARTMENT
ONE MICROSOFT WAY
REDMOND, WA 98052-6399

EXAMINER	
TRAN, HAI V	
ART UNIT	**PAPER NUMBER**
2623	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/770,765	FEDER ET AL.	
	Examiner	Art Unit	
	Hai Tran	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 October 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-61* is/are pending in the application.

4a) Of the above claim(s) *1-29,36,40-42,46 and 58* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *30-35,37-39,43-45,47-57,59-60* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 10/20/06
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/20/2006 has been entered.

Response to Arguments

Applicant's arguments filed 10/20/2006 have been fully considered but they are not persuasive.

Applicant argues, (Applicant's remark page 9), "...However, as clearly disclosed by Day, these various operating characteristics relate to the various formats of the video and have nothing to do with the *content of the video data*. See col. 5, lines 60-64. Accordingly, the only processing taught by Day relates to ensuring a seamless data stream in which all the data sources are converted to a same operating characteristic (or same format). This disclosure is clearly very different from the claimed identifying of compression parameters and degrading of image quality is based on (1) a function of the type of data wherein the types of data *are determined from the content of data* received from the respective plurality of data sources."

In response, the Examiner respectfully disagrees with Applicant because Applicant amended claim 30 and newly added claim 61 do not clearly define limitations "types of data" and "content of data". As such, "types of data" broadly reads on encoding type of data (i.e., the level of encoding resolution, encoding rate., etc...), and "content of data" broadly reads on anything and everything, i.e., bits and bytes of video file, frames of video file, or video file itself. Note: "content of data" is NOT the *content of the video data*, as alleged by Applicant.

As previously discussed (see previous Office Action), Day discloses that encoding is selected based on a function of the type of data, i.e., encoding rate of the video vs the transfer rate of the communication link, the play rate vs the display scan rate **and** encoding resolution according to the resolution of the display device. Day further discloses degrading image quality based on a function of any particular (encoding) type of multimedia file because, at least, based on the resolution of the display device, Day encodes the selected video file according to the resolution of the display, for example if the selected video file is encoded with high-resolution (encoding type, i.e., high image quality) then Day system re-encodes selected high-resolution encoded video file to the same resolution of the Display device, i.e., low-resolution display device, thereby degrading the image quality of the high-resolution encoded video file according to the encoding resolution level that corresponds to the supported resolution of the display device.

In view of that, the Examiner asserts that Day clearly discloses identifying of compression parameters and degrading of image quality is based on (1) a function of

the types of data (encoding type, such as encoding resolution level, encoding rate of the video), wherein the types of data are determined from the video file received from the respective plurality of data sources (see Col. 4, lines 9-19 and Col. 5, lines 65-Col. 6, lines 25).

In conclusion, the Examiner maintains the rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 30-35, 37-39, 43-45, 47-56, and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams (US 6044396) in view of Day et al. (US5996015).

Regarding Claim 30, Adams shows a system that receives data from the plurality of sources and a method of bandwidth allocation for transmitting video on a cable network comprising identifying compression parameters to be used to compress the data that is received from the sources to a desired depth of compression (col. 5 lines 10-50, encoding rate determined by the bandwidth availability), associating the compression parameters with a set of values and threshold ranges (col. 5 lines 15-50, col. 6 lines 15-50, using parameters of B buffer fullness, T buffer threshold, and Cm maximum rate to determine proper encoding

rate), receiving data from a plurality of data sources a plurality of data sources (col. 2 lines 27-4 I , col. 4 lines 35-50), differentially converting the data sources into compressed video streams responsive to an instantaneous resource restriction (col. 5 lines 10-50, col. 7 lines 30-45), and multiplexing the compressed video streams on a single transmission line (col. 4 lines 35-50, see fig. 1 item 1 10, fig. 2).

Adams fails to show differentially converting the data to a desired depth of compression and for degrading image based on a function of the types of data to be displayed and a function of client capabilities, wherein the types of data are determined from content of data received from the respective plurality of data sources.

Day discloses differentially converting the data to a desired depth of compression and for degrading image based on a function of the types of data to be displayed and a function of client capabilities, wherein the types of data (encoding type of data, i.e., the level of resolution of data to be encoded) are determined from content of data (i.e., bits and bytes of video file, frames of video file, or video file) received from the respective plurality of data sources (Col. 5, lines 65-Col. 6, lines 25). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Adams to encode/compress data according to client device capability, as taught by Day, so to ensure that all of the multimedia segments have common operating characteristics thereby accommodating with the bit rate/transfer rate of the communication link and the "play rate" and resolution of

the display device and moreover avoiding any possibly data loss and any undesirable effects during the video or audio or other multimedia presentation.

Regarding Claim 31, Adams in view of Day further shows converting each stream into a different frame rate (Day; Col. 4, lines 10-17).

Regarding Claim 32, Adams shows that the frame quality maybe increased depending on bandwidth availability (col. 2 lines 12-17).

Regarding Claims 33 and 48, Adams shows that the resource restriction comprises bandwidth restrictions (col. 5 lines 10-50, lines 64-67).

Regarding Claims 34 and 49, Adams in view of Day (Col. 6, lines 9-25) further shows that the resource restriction comprises a computing restriction.

Regarding Claim 35, Adams shows that the data sources comprise display commands, or instructions on how the data will be displayed (col. 1 lines 50-59, col. 2 lines 42-44; Col.. 4 lines 58-59). This 'application data' or 'auxiliary packets' are data that describe how the 'frame' of MPEG data is displayed. The data describing what frames are to be displayed or what bit rate to use are the display commands. The information tells the receiver how to create, or display, the image at the user site.

Regarding Claim 37, "providing an indication of the content with the data sources" reads VOD list with explicit link to each video stored (Day; Col. 4, lines 30-65+).

Regarding Claim 38, Adams shows that it is possible to analyze, based on the display commands, such as bit rate and application data to determine the content of the data, such as a slow moving scene (col. 2 lines 12-17).

Regarding Claim 39, Adams shows that applications data, generated by software, indicates information about the content of the data (col. 1 lines 50-59, col. 2 lines 42-44; Col. 4 lines 58-59).

Regarding Claim 43, Adams in view of Day further shows wherein the instantaneous resource restriction comprises an instantaneous computing resource restriction (Day; Col. 5, lines 63-Col. 6, lines 25).

Regarding claim 44, Adams in view of Day (Col. 4, lines 10-17; Col. 5, lines 65-Col. 6, lines 25) further shows wherein the differentially converting comprises converting each data source to a different frame rate compressed video stream.

Regarding Claims 45 and 47, Adams (col. 2 lines 12-17) in view of Day shows that the frame quality may be increased/decrease depending on bandwidth availability.

Regarding Claim 50, Adams shows using asynchronous compression and MPEG-2 encoding (col. 5 lines 10-27, synchronous transfer mode and variable bit rate as a result of MPEG-2). Furthermore, MPEG-2 type encoding inherently only sends data when a change has occurred in the image, as expressed in a P or B frame.

Regarding Claim 51, Adams (col. 5 lines 45-67, col. 6 lines 1-50, controlling the fullness of the encoding buffer B based on bandwidth availability) in view of Day (Col. 6, lines 20-31) further shows using a variety of data buffers, which queue and delay generation of compressed data to accommodate the instantaneous resource restriction.

Regarding claim 52, Adams in view of Day (Col. 4, lines 10-18; Col. 5, lines 30-52; Col. 5, lines 65-Col. 6, lines 2) further discloses wherein a same compression depth is achieved for each client receiving compressed video streams from the system.

Regarding claim 53, Adams in view of Day (Col. 4, lines 10-18; Col. 5, lines 30-52; Col. 5, lines 65-Col. 6, lines 2) further discloses wherein the content includes a hint corresponding to how the content should be compressed and multiplexed based upon a minimum bandwidth requirement needed by the client.

Regarding claim 54, Adams in view of Day (Col. 4, lines 10-18; Col. 5, lines 30-52; Col. 5, lines 65-Col. 6, lines 2) further discloses wherein the hint comprises a hint regarding a maximum quality reduction that can be applied to the content.

Regarding claim 55, Adams in view of Day (Col. 4, lines 10-18; Col. 5, lines 30-52; Col. 5, lines 65-Col. 6, lines 2) further discloses wherein the types of data to be displayed include parts of a display.

Regarding Claim 56, although icons and menus can be sent in the systems of Adams in view of Day, Adams in view of Day does not specifically disclose wherein the parts of the display include at least one of the icon and a menu bar.

Official Notice is taken that icons and/or menu bar to be part of the display is notoriously well known in the art. Therefore, it would have been obvious to modify the system of Adams in view of Day to have icons/menu bar to be part of the display so to provide to user a friendly GUI for navigating among items on the display.

Claim 61 is analyzed with respect to system claim 30.

2. Claim 57 rejected under 35 U.S.C. 103(a) as being unpatentable over Adams (US 6044396) in view of Day et al. (US5996015), and further in view of Lavallee (6,215,904).

Regarding Claim 57, Adams shows compressing and sending computer application and control data in addition to video data (col. 4 lines 50-65,Application data). Although text can be sent in the systems of Adams in view of Day, they fail to specifically state creating more compression for text data.

Lavallee shows creating different compression for various data, depending if it is image or text data (col. 3 lines 10-67, selecting an encoding scheme based on the content of an image, such as text or pictures). It would have been obvious to modify the system of Adams in view of Day with the ability to compress text to a greater extent, as taught by Lavallee so that the most efficient data was sent to the user.

3. Claims 59-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams (US 6044396) in view of Day et al. (US5996015), and further in view of Mussman et al. (US 6243388).

Regarding claims 59-60, Adams in view of Day, all describe digital data packet streaming systems that require some type of client computer address in order to send appropriate data (such as an IP address/'digital subscriber number'), but they fail to specifically state using an 'customer identifier'.

Mussman clearly shows using a customer identifier to locate clients in a broadband system (col. 11, lines 1-10, col. 12 lines 15-37, customer units identified by subscriber number). It would have been obvious to one of ordinary skill in the art at the time the invention was made, and is well known in the art, to modify Adams in view of Day with a client/device subscriber number so as to uniquely identify and communicate with a specific client/device.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Tran whose telephone number is (571) 272-7305. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher S. Kelley can be reached on (571) 272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HT:ht
01/05/2007

HAI TRAN
PRIMARY EXAMINER